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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/547,243	04/11/2000	Stanley Young Hobbs	RD-27.538	4419

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GENERAL ELECTRIC COMPANY
GLOBAL RESEARCH
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SCHENECTADY, NY 12301-0008

EXAMINER

GARCIA OTERO, EDUARDO

ART UNIT	PAPER NUMBER
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2123

DATE MAILED: 03/31/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/547,243

Applicant(s)

HOBBS ET AL.

Examiner

Eduardo Garcia-Otero

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 04 March 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-72 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-72 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 04 March 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION: Final Action

Introduction

1. Title is: METHOD, SYSTEM, AND PROGRAM PRODUCT FOR ENABLING DESIGN OF PRODUCTS HAVING A VISUAL EFFECT
2. First named inventor is: HOBBS
3. Claims 1-72 have been submitted, examined, and rejected.
4. Priority is claimed to provisional US application filed 8/9/99.
5. This final action is in response to Applicant's amendment received 3/4/04.

Index of Prior Art

6. **Pringle** refers to US Patent 6,166,814.
7. **McKay** refers to US Patent 5,593,773.
8. **Computer Images** refers to Computer Images (Understanding Computers series), by Time-Life Books, 1986, ISBN 0-8094-5662-1, pages 34-35, 68-69, 78-79, 80, 102.
9. **Communications** refers to Communications (Understanding Computers series), by Time-Life Books, 1986, ISBN 0-8094-5700-8, pages 66-67.
10. **Computer Security** refers to Computer Security (Understanding Computers series), by Time-Life Books, 1986, ISBN 0-8094-5670-2, pages 76-77.

Applicant Remarks

11. AMENDMENTS TO SPECIFICATION AND DRAWING. Applicant's amendments to the specification and FIG 8 have resolved all related prior objections. The Examiner appreciates the clear and detailed amendments. Said prior objections are withdrawn.
12. CLAIM INTERPRETATION OF CLAIM 36. Applicant asserts that claim 36 is a "system", and is not a "process". However, note that the 35 USC 101 statutory classes are explicitly limited to: process, machine, manufacture, composition of matter, and improvements thereof. Thus, the term system must be interpreted as one (and only one) of these statutory classes.
13. Note that means plus function language is acceptable per 35 USC 112 sixth paragraph, but is not very dispositive for determining precisely which statutory class is intended by the term "system" in claim 36.

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14. Thus, in view of the claim limitation language, and in view of the specification, the Examiner now interprets claim 36 as a “machine” (or apparatus) statutory class claim, per the 35 USC 101 statutory categories.
15. CLAIMS 1 AND 12, VISUAL EFFECT. Regarding claim 1, Applicant Remarks page 7 discusses the claim 1 term “visual effects” as defined at specification page lines 22-26 “includes, for example, speckled, metallic...” The Examiner interprets said term “visual effects” very broadly, because the specification merely provides some very broad examples. Thus, the prior art clearly discloses “visual effects”. For example, Computer Images page 102 states “graphics now penetrate all three phases of computerized manufacturing, from conceptualizing the product to actually making it... manufacturers prize the enormous gains in productivity made possible by computer simulations”, and page 68-69 “To mimic reality, computer graphics must imitate the intricate play of light in a scene, where countless individual rays are reflected from shiny surfaces, absorbed by dull ones, blocked by opaque objects and transmitted, to a greater or lesser degree, by transparent and translucent ones. For a computer to emulate these effects requires a rendering technique called ray tracing.”
16. CLAIMS 1 AND 12, ADDITIVES. Regarding claim 1, Applicant Remarks page 8-9 asserts that the combination of Pringle and Computer Images “does not contemplate the capability of allowing one to design a product having a visual effect caused by an additive”. First, note that the term “enabling design...” is in the preamble of claim 1, and is interpreted as merely an intended use. Second, both Pringle and Computer Images clearly disclose using the simulated visual effect for design of products, see “enormous gains in productivity” (per Computer images page 102) by reducing the number of “trial” coatings (per Pringle column 2 line 23) required to obtain the desired product.
17. CLAIMS 2-11. Applicant’s assertions are not persuasive, the rejections are maintained. See above discussion regarding “visual effects”.
18. CLAIMS 13-24. Applicant’s assertions are not persuasive, the rejections are maintained. See above discussion regarding “visual effects”.
19. CLAIM 25-35. Applicant’s assertions are not persuasive, the rejections are maintained. See above discussion regarding “visual effects”.

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20. CLAIMS 36-48. Applicant's assertions are not persuasive, the rejections are maintained. See above discussion regarding "visual effects".

21. SUMMARY. In summary, the prior objections to the specification and drawings are withdrawn, and the claim interpretations and claim rejections are maintained without change.

Claim Interpretation

22. **The claim language is interpreted in light of the specification.** Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

23. In claim 25, the term "system" is interpreted as the 35 USC 101 statutory category of "machine".

24. In claim 36, the term "system" is interpreted as the 35 USC 101 statutory category of "machine".

Claim Rejections - 35 USC § 103

25. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action: (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

26. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows: Determining the scope and contents of the prior art. Ascertaining the differences between the prior art and the claims at issue. Resolving the level of ordinary skill in the pertinent art. Considering objective evidence present in the application indicating obviousness or nonobviousness.

27. Claims 1-72 are rejected under 35 U.S.C. 103(a) as being unpatentable.

28. Claim 1 is rejected under 35 U.S.C. 103(a) as being unpatentable over Pringle in view of Computer Images.

29. Claim 1 is an independent "computer-implemented method" claim with 2 limitations. For clarity, the Examiner uses bracketed numbers to identify multiple limitations in a single claim.

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30. [1]-**“obtaining information relating to the additive”** is disclosed by Pringle column 1 line 22 “modeling the paint as diffusely scattering pigments immersed in a binder... Kabulka-Munk equations... identify the concentrations of pigments... transformation needs to be quantified experimentally, with the theory providing the ability to accurately interpolate between measurement points”.
31. Pringles does not expressly disclose the additional limitation.
32. [2]-**“providing a representation of the product having the visual effect based on the information relating to the additive”** is disclosed by Computer Images page 102 “graphics now penetrate all three phases of computerized manufacturing, from conceptualizing the product to actually making it... manufacturers prize the enormous gains in productivity made possible by computer simulations”, and page 68-69 “To mimic reality, computer graphics must imitate the intricate play of light in a scene, where countless individual rays are reflected from shiny surfaces, absorbed by dull ones, blocked by opaque objects and transmitted, to a greater or lesser degree, by transparent and translucent ones. For a computer to emulate these effects requires a rendering technique called ray tracing.” Note that the drawing on pages 68-69 in the original prior art is in color, but only black and white copies are placed in the file and mailed to Applicant.
33. **At the time** the invention was made, it would have been obvious to a person of ordinary skill in the art to use Computer Images to modify Pringle. One of ordinary skill in the art would have been motivated to do this to achieve “enormous gains in productivity” (per Computer images page 102) by reducing the number of “trial” coatings (per Pringle column 2 line 23) required to obtain the desired product.
34. Claims 2- 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Pringle in view of Computer Images and McKay and Computer Security.
35. In claim 2, **“additive comprises information relating to a flake material”** is disclosed by Pringle column 1 line 65 “aluminum flakes are mixed into the binder with the pigment”, and column 2 line 30 “distribution of flakes must be modeled in a statistical manner” and FIG 1 showing flakes and diffusely scattered pigments.
36. In claim 3, [1] **“type of flake material”** is disclosed by McKay at column 1 line 13 “median particle size”, and line 15 “aspect ratio”, and line 63 “aluminum or aluminum alloy flakes”.

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37. Also in claim 3, [2] **“concentration of the flake material”** is disclosed by McKay at column 2 line 5 “Metal flake pigments... concentrations of 1 to 30% by weight”.
38. In claim 4, **“information relating to a diffuser material”** is disclosed by Pringle column 1 line 22 “modeling the paint as diffusely scattering pigments immersed in a binder... Kabulka-Munk equations... identify the concentrations of pigments... transformation needs to be quantified experimentally, with the theory providing the ability to accurately interpolate between measurement points”, and by Computer Images page 68-69 “To mimic reality, computer graphics must imitate the intricate play of light in a scene, where countless individual rays are reflected from shiny surfaces, absorbed by dull ones, blocked by opaque objects an transmitted, to a greater or lesser degree, by transparent and translucent ones. For a computer to emulate these effects requires a rendering technique called ray tracing.”
39. In claim 5, [1] **“a type of diffuser material”** is disclosed by McKay at column 1 line 13 “median particle size”, and line 15 “aspect ratio”, and line 63 “aluminum or aluminum alloy flakes”.
40. Also in claim 5, [2] **“a concentration of diffuser material”** is disclosed by McKay at column 2 line 5 “Metal flake pigments... concentrations of 1 to 30% by weight”.
41. Also in claim 5, [3] **“a thickness of the product”** is disclosed by Computer Images page 68 “imitate the intricate play of light... ray tracing... shape, position, colors, textures”, and drawing on pages 68-69.
42. Also in claim 5, [4] **“a distance between the product an object to be observed behind the product”** is disclosed by Computer Images page 68 “imitate the intricate play of light... ray tracing... shape, position, colors, textures”, and drawing on pages 68-69.
43. In claim 6, **“color of the product”** is disclosed by Computer Images page 68 “imitate the intricate play of light... ray tracing... shape, position, colors, textures”, and drawing on pages 68-69.
44. In claim 7, **“retrieving the representation from a database of representations associated with a plurality of products having visual effects, and computer generating the representation of the product having the visual effect”** is disclosed by Computer Images page 34 “Once created... stored in a library of shapes and recalled for future use”, and page 35 “a library of basic circuit components”, and pages 79 “5 key frames of a deer”, and page

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- 80 “library of 26 preformed solid shapes”, and page 84 “The ship could be enlarged or reduced in size at will, and—more significant—it could be easily replicated”.
45. In claim 8, **“storing the representation... and allowing authorized access”** is disclosed by Computer Security at page 76-77 “Controlling Access to Computer files”.
46. In claim 9, **“obtaining a request for a physical sample of the product having the visual effect”** is disclosed by Pringle column 2 line 23 “trial” coatings.
47. In claim 10, **“determining ingredients and concentrations for producing the product having the visual effect”** is disclosed by Computer Images page 102 “graphics now penetrate all three phases of computerized manufacturing, from conceptualizing the product to actually making it... manufacturers prize the enormous gains in productivity made possible by computer simulations”.
48. In claim 11, **“plastic material”** is Pringle column 1 line 22 “modeling the paint as diffusely scattering pigments immersed in a binder”, and Computer images page 102 “plastic”
49. **MOTIVATION FOR CLAIMS 2-11.** At the time the invention was made, it would have been obvious to a person of ordinary skill in the art to use Computer Images and McKay and Computer Security to modify Pringle. One of ordinary skill in the art would begin with Pringles as a basic model of flaked paint, would be motivated to use Computer Images ray tracing simulations in order to gain in productivity by simulating designs to determine the design parameters before producing Pringle’s trial coatings.
50. Further, one of ordinary skill in the art would be motivated to improve the detail and accuracy of the Pringles model by incorporating additional details from McKay such as the physical parameters of the flake and the concentration of the flake, and by incorporating additional details from Computer Images such as the shape and positions of the objects for ray tracing. All of these properties are essential for accurate ray tracing. Additionally, it is good standard computer image “bookkeeping” procedure to save time by organizing sets of related images in database libraries per Computer Images, and to exercise good standard security practices by restricting access per Computer Security in order to protect the data and the programs.
51. Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Pringle in view of Computer Images.

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52. Claim 12 is an independent “method” claim with 3 limitations. For clarity, the Examiner uses bracketed numbers to identify multiple limitations in a single claim.
53. [1]-“**obtaining information relating to the additive**” is disclosed by Pringle column 1 line 22 “modeling the paint as diffusely scattering pigments immersed in a binder... Kabulka-Munk equations... identify the concentrations of pigments... transformation needs to be quantified experimentally, with the theory providing the ability to accurately interpolate between measurement points”.
54. Pringles does not expressly disclose the additional limitation.
55. [2]-“**providing a representation of the product having the visual effect based on the information relating to the additive**” is disclosed by Computer Images page 102 “graphics now penetrate all three phases of computerized manufacturing, from conceptualizing the product to actually making it... manufacturers prize the enormous gains in productivity made possible by computer simulations”, and page 68-69 “To mimic reality, computer graphics must imitate the intricate play of light in a scene, where countless individual rays are reflected from shiny surfaces, absorbed by dull ones, blocked by opaque objects and transmitted, to a greater or lesser degree, by transparent and translucent ones. For a computer to emulate these effects requires a rendering technique called ray tracing.” Note that the drawing on pages 68-69 in the original prior art is in color, but only black and white copies are placed in the file and mailed to Applicant.
56. [3]-“**first computing unit coupled via a communications network to a second computing unit**” is disclosed by Communications page 66-67 “number of machines... network... communication system dispersed over a wide geographical area”.
57. **At the time** the invention was made, it would have been obvious to a person of ordinary skill in the art to use Computer Images and Communications to modify Pringle. Starting with Pringle’s basic model of flaked paint, one of ordinary skill in the art would be motivated to look to use Computer Images simulation in order to achieve “enormous gains in productivity” (per Computer Images page 102) by reducing the number of “trial” coatings (per Pringle column 2 line 23) required to obtain the desired product. One of ordinary skill would further be motivated to provide this simulation efficiently to many users by using a

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communications network to efficiently connect the multiple users. Using a network further allows the software and data to be centralized, and to control access.

58. Claims 13-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Pringle in view of Computer Images and Communications and McKay and Computer Security.
59. Claims 13-24 depend from independent claim 12
60. Claims 13-22 have the same additional limitations as dependent claims 2-11 respectively, and thus are rejected for the same reasons.
61. In claim 23, **“communications network is a global computer network”** is disclosed by Communications page 66-67 “number of machines... network... communication system dispersed over a wide geographical area”.
62. In claim 24, **“transferring, from the second computing unit a module for representing a plurality of products having a plurality of additives to the first computing unit”** is disclosed by Communications page 66-67 “Packet Switching: An Efficient Way to Shuttle Data... allow users in several locations to share computing facilities and resources”, and Computer Images page 35 “use Sketchpad to create a library of basic circuit components such as transistors and resistors”.
63. **MOTIVATION FOR CLAIMS 13-24.** At the time the invention was made, it would have been obvious to a person of ordinary skill in the art to use Computer Images and Communications and McKay and Computer Security to modify Pringle. Starting with Pringle’s basic model, one of ordinary skill in the art would be motivated to look to use Computer Images simulation in order to achieve “enormous gains in productivity” (per Computer Images page 102) by reducing the number of “trial” coatings (per Pringle column 2 line 23) required to obtain the desired product. One of ordinary skill would further be motivated to provide this simulation efficiently to many users by using a communications network to efficiently connect the multiple users. Using a network further allows the software and data to be centralized, and to control access, and to efficiently shuttle data and share resources. Further, one of ordinary skill in the art would motivated to improve the detail and accuracy of the Pringles model by incorporating additional details from McKay such as the physical parameters of the flake and the concentration of the flake, and by incorporating additional details from Computer Images such as the shape and positions of the

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objects for ray tracing. All of these properties are essential for accurate ray tracing. Additionally, it is good standard computer image “bookkeeping” procedure to save time by organizing sets of related images in database libraries per Computer Images, and to exercise good standard security practices by restricting access per Computer Security in order to protect the data and the programs. One of ordinary skill would further be motivated to provide this simulation efficiently to many users by using a communications network to efficiently connect the multiple users. Using a network further allows the software and data to be centralized, and to control access.

64. Claim 25 is rejected under 35 U.S.C. 103(a) as being unpatentable over Pringle in view of Computer Images and Communications.
65. Claim 25 is an independent “system” (machine) claim with 3 limitations. For clarity, the Examiner uses bracketed numbers to identify multiple limitations in a single claim.
66. [1]-“**obtaining information relating to the additive**” is disclosed by Pringle column 1 line 22 “modeling the paint as diffusely scattering pigments immersed in a binder... Kabulka-Munk equations... identify the concentrations of pigments... transformation needs to be quantified experimentally, with the theory providing the ability to accurately interpolate between measurement points”.
67. Pringles does not expressly disclose the additional limitation.
68. [2]-“**providing a representation of the product having the visual effect based on the information relating to the additive**” is disclosed by Computer Images page 102 “graphics now penetrate all three phases of computerized manufacturing, from conceptualizing the product to actually making it... manufacturers prize the enormous gains in productivity made possible by computer simulations”, and page 68-69 “To mimic reality, computer graphics must imitate the intricate play of light in a scene, where countless individual rays are reflected from shiny surfaces, absorbed by dull ones, blocked by opaque objects and transmitted, to a greater or lesser degree, by transparent and translucent ones. For a computer to emulate these effects requires a rendering technique called ray tracing.” Note that the drawing on pages 68-69 in the original prior art is in color, but only black and white copies are placed in the file and mailed to Applicant.

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69. [3]-“**first computing unit coupled via a communications network to a second computing unit**” is disclosed by Communications page 66-67 “number of machines... network... communication system dispersed over a wide geographical area”.
70. [4]-“**processor**” is disclosed by Computer Images page 102 “graphics now penetrate all three phases of computerized manufacturing, from conceptualizing the product to actually making it...”. Note that said computers contain processors.
71. **At the time** the invention was made, it would have been obvious to a person of ordinary skill in the art to use Computer Images and Communications to modify Pringle. Starting with Pringle’s basic model of flaked paint, one of ordinary skill in the art would be motivated to look to use Computer Images simulation (using processors) in order to achieve “enormous gains in productivity” (per Computer Images page 102) by reducing the number of “trial” coatings (per Pringle column 2 line 23) required to obtain the desired product. One of ordinary skill would further be motivated to provide this simulation efficiently to many users by using a communications network to efficiently connect the multiple users. Using a network further allows the software and data to be centralized, and to control access, and to efficiently bill the user.
72. Claims 26-35 are rejected under 35 U.S.C. 103(a) as being unpatentable over Pringle in view of Computer Images and Communications and McKay and Computer Security.
73. Claims 26-35 depend from claim 25, with the same additional limitations as claims 2-11 respectively, and thus are rejected for the same reasons.
74. **MOTIVATION FOR CLAIMS 26-35.** At the time the invention was made, it would have been obvious to a person of ordinary skill in the art to use Computer Images and McKay and Computer Security to modify Pringle. One of ordinary skill in the art would begin with Pringles as a basic model of flaked paint, would be motivated to use Computer Images ray tracing simulations in order to gain in productivity by simulating designs to determine the design parameters before producing Pringle’s trial coatings.
75. Further, one of ordinary skill in the art would motivated to improve the detail and accuracy of the Pringles model by incorporating additional details from McKay such as the physical parameters of the flake and the concentration of the flake, and by incorporating additional details from Computer Images such as the shape and positions of the objects for ray tracing.

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All of these properties are essential for accurate ray tracing. Additionally, it is good standard computer image “bookkeeping” procedure to save time by organizing sets of related images in database libraries per Computer Images, and to exercise good standard security practices by restricting access per Computer Security in order to protect the data and the programs.

76. Claims 36-48 are rejected under 35 U.S.C. 103(a) as being unpatentable over Pringle in view of Computer Images and Communications and McKay and Computer Security.
77. Claims 36-48 are “means for” claims with the same limitations as claims 12-24 respectively, and are rejected for the same reasons with the same motivation.
78. Claims 49-59 are rejected under 35 U.S.C. 103(a) as being unpatentable over Pringle in view of Computer Images and McKay and Computer Security.
79. Claims 49-59 are “program storage device readable by a machine” claims with the same limitations as claims 1-11 respectively, and are rejected for the same reasons.
80. Claims 60-72 are rejected under 35 U.S.C. 103(a) as being unpatentable over Pringle in view of Computer Images and Communications and McKay and Computer Security.
81. Claims 60-72 are “article of manufacture” claims with the same limitations as claims 12-24 respectively, and are rejected for the same reasons.

Conclusion

82. All claims stand rejected.

Potentially Patentable material

83. At present, the Examiner believes that this application may contain some potentially patentable material. Specifically, specification page 10 and FIG 6 discuss an interesting procedure for simulating irregular 650 micron flakes. Only certain pixel configurations are allowed, as illustrated by the FIG 6 rightmost simulated flake, with a square core of 4 pixels and an additional “dashed portion” of three adjacent pixels wrapping one of the corners. Excluding other configurations as “unacceptable” for 650 micron flakes is not disclosed by the prior art of record. The Examiner interprets FIG 6 as disclosing 4 allowable configurations, where said “dashed portion” wraps one of the 4 possible corners of the square core.
84. If the Applicant decides to continue prosecution of the present application, then the Examiner requests additional discussion and clarification regarding the specification page 10 statement

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"This configuration... could easily be adapted to the construction of larger, irregular particles". Note that specification page 9 Table 1 does not list any sizes above 650 mean particle size. For example, what is the next larger standard metal flake particle size, and precisely how would it be modeled using the "configuration" from FIG 6 rightmost flake?

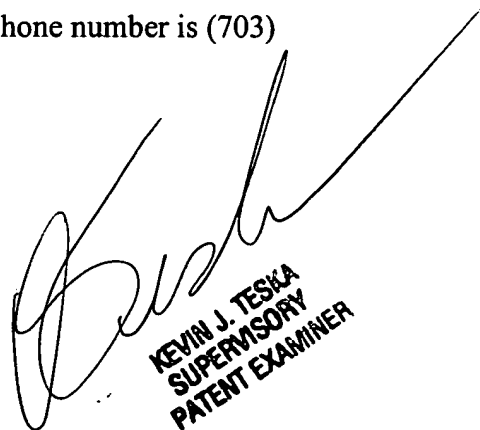
FINAL OFFICE ACTION

85. THIS ACTION IS MADE FINAL. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a). A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Communication

86. Any inquiry concerning this communication or earlier communications from the Examiner should be directed to Eduardo Garcia-Otero whose telephone number is 703-305-0857. The examiner can normally be reached on Tuesday through Friday from 9:00 AM to 7:00 PM. If attempts to reach the Examiner by telephone are unsuccessful, the Examiner's supervisor, Kevin Teska, can be reached at (703) 305-9704. The fax phone number for this group is 703-872-9306. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the group receptionist, whose telephone number is (703) 305-3900.

* * * *


KEVIN J. TESKA
SUPERVISORY
PATENT EXAMINER